

Full Step Jefferson Nickels: A Re-Evaluation

[this file is best viewed and printed in color]

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[an amateur coin collector, ANA # 3179303, and
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First a short quiz: please make a selection from the choices below,



from the above photo, select how many FULL steps you see:

- A: ☐ 3 full steps
- B: ☐ 4 full steps
- C: ☐ 5 full steps
- D: ☐ 6 full steps



- A: ☐ 3 full steps
- B: ☐ 4 full steps
- C: ☐ 5 full steps
- D: ☐ 6 full steps

And finally, one more quiz:



- A: ☐ 2 full steps
- B: ☐ 3 full steps
- C: ☐ 4 full steps
- D: ☐ 5 full steps
- E: ☐ 6 full steps

Before I share my "correct" answers, we need to be on the same page. Notice that there are four columns above the steps [actually there are two rows of columns, but the front four are fully visible]. In analyzing the steps, serious collectors have devised a very practical scheme for indicating the fullness of the steps. Moving from the left column to the right column, we number them 1, 2, 3, 4. We then visualize the steps in four segments, or four quarters—beneath each column is a section. So on a five step nickel, (if all five steps are visible), we would see 5 steps in each quarter. Written notation describing this would appear as "5-5-5-5", indicating five FULL steps under each column. If under column 2 there were only 3 visible full steps, then we would see: 5-3-5-5.

The first image is a 1979 D, and answer C would be best. Actually it is 5-5-4-5. The very uppermost step is quite thin, so one must look carefully. Also barely visible, is a short bridge under column #3. "A "bridge" you say? Yes, a bridge is where two steps have merged, either from lack of strike pressure, or post mint damage. The second image shows five full steps (D), clearly a 5-5-5-5, and PCGS grades this 1994 D as "FS" which it is. The third image shows four full steps, it is a 1950 D, showing 5-4-4-5. If you got all three correct, then you probably do not need to read this essay. But if you missed one or more, this essay may prove useful to you, to that end I proceed.

BRIEF INTRODUCTION

I began collecting coins as a nine year old boy in 1956. I stopped just after my tours in Vietnam. I began again in 2009. From my early years I kept only my Lincoln cent collection. I sold my other collections in 1971 (a mistake!).

In 2009, I began to focus upon the Jefferson nickel as it struck me as one of the very best American coins to collect for several reasons:

- (1) they remain the ONLY consistently minted alloy in America. They have remained 25 % Ni and 75 % Cu since 1866, except for several WW II years. I like consistency (perhaps because I myself am so inconsistent!).
- (2) They are probably the hardest alloys struck by the US mint, and thus a variety of strike types exist. (Which makes for interesting collecting!).
- (3) they were (some still are) relatively inexpensive.

Back in 2009 the FS (full step) craze had not then really swamped the auction sites. Although back then I focused upon the overall appearances and luster. But I do recall seeking out FS nickels. Today my nickel collection is exclusively FS only. And as I roll-search and bid on items, I have increasingly noticed that I grade too conservatively. Yet, even conservative graders and I disagreed. Something was amiss!

I come from a "classical" background, trained in ancient languages, palaeography, linguistics and in the creation of computer fonts. I have carefully crafted more than a dozen full fonts over the years. (The *italic font* used in this paper is my creation: serif44i.ttf). I also studied and appreciated Greek and Roman architecture. So when I examined the steps on the Jefferson nickel I was relying upon my past knowledge of Greek architecture. This knowledge was the problem. The evolving standard(s) for the reckoning of the steps did not base their concepts upon the actual architecture of Jefferson's Monticello.

Over and over, I kept counting 4 full steps on coins which others had labeled as 5 full steps. On 6 FS coins, I saw only 5 FS! Thus a major disagreement ensued. This brief paper was borne out of this disagreement. Herein I state my case.

I am also aware that other nickel students are beginning to agree to a standard grading scheme, so they will be highly dismayed to read this paper. They will view my proposals as a set-back, I view them as a clarification based upon the facts of the matter.

Nickel coin collectors began to take into account the striking of the steps not long after the first coins were struck. I read that in the 1940s collectors were noting the quality of the steps.¹ However in 1971 the PAK club was formed and they began to standardize the steps they saw on Monticello.¹ They broke the area of the steps into 4 quarters with 6 units per quarter, so to them if a nickel was a "24" that meant it had 6 full steps. This method was later improved by Darrel Crane (the FSNC Full Step Nickel Club) by indicating the steps in each

quarter rather than all four quarters. Hence we now see a 5-5-5-4 instead of a "19 step nickel". The "19" does not inform the viewer where the problem is, whereas showing the number of visible steps under each column as Crane did, clarifies the location of the bridge or gouge. This was all well and good, except since 1971 a major flaw was embedded into all of the subsequent attempts! They all were counting the stylobate as a step! It is not a step, never was, never will be, except in the misguided opinions/presumptions of the nickel clubs and the TPGs, OR if it is resting upon a stereobate.

The professional grading services (in particular - NGC and PCGS) began assigning FS (or 5FS, 6FS) designations so as to appease their markets/customers. Their definitions of such nickels leaves a lot to be desired: here is the PCGS official statement:

FS: Full Steps

Jefferson Nickels. MS60 or better, at least five complete steps must appear on Monticello. Any steps that join or fuse together, whether created that way or subsequently damaged, cannot be considered for the Full Steps designation.

Note that they do not even mention the effect which major gouges or bag marks or dings would have on the steps!

NGC is a bit clearer:

NGC utilizes two designations to reflect the relative degrees of fullness in these steps: 5FS indicates that five of the six steps are complete, while 6FS is a rare designation reserved for those coins displaying six, uninterrupted steps. The presence of full steps on a nickel does not affect its numerical grade at all, and gems can exist both with and without this additional asset.

This is further embellished with the following:

Coins Will Be Designated as Either 5FS or 6FS

Starting February 16, 2004, Numismatic Guaranty Corporation will begin labeling Full Step Jefferson Nickels as either 5FS or 6FS, based on the number of complete steps visible. Jefferson Nickels are often weakly struck on the steps of Monticello, and coins that are sharp in this portion of the design are prized by series specialists.

NGC has been using the single designation FS for many years, this designation being reserved exclusively for those coins having all six steps of Monticello complete. The growing popularity of this series, as well as the great rarity of coins having six full steps, prompted requests from NGC's customers to provide a 5-Full Step designation for those coins that qualify. Specialists in this series know that even 5FS coins are challenging to locate for many Jefferson Nickel issues, and such coins are often highly prized.

This is better, as "uninterrupted" is a key term which of course would include bag marks and other flaws. Both statements should be improved! Here is my suggestion:

A full step nickel, [5-3-5-5 or 6-6-4-6] is one wherein one or more steps fully extends left and right, without any bridges or major gouges, without interruptions of any kind. A minor scratch or very slight bag mark is permitted, as long as the scratch does not extend below the depth of the incused risers. The number of bag marks or scratches can vary, but should be minimal, using common sense and eye appeal. This applies to a full five step coin as well as the rarer full six step coin. A simple designation is recommended, these being "5FS 5-5-5-5", or "6FS 6-6-6-6". NOTE: the 5-5-5-5 or 6-6-6-6 numbers must be indicated. Four full steps would appear as "4FS 5-4-4-5". Strictly speaking any interruption within the steps, be it a deep bag mark or very slight bridge, producing a 4-5-4-5, etc. would be rated as 4FS, the numbers "4-5-4-5" MUST be on the label, in order to be graded as a 4FS. The same applies to a 6-6-5-6, or 5-6-6-6 designations: both would be a "5FS", the lower number—being the number of actual full steps—should precede the FS, hence "5FS" .

Pretty strict, but clear. If there are no full steps, it should not bear the label as FS. The labels should show the section numbers data (4-4-3-4 etc.). But the above recommendation is secondary to the real problem. It lies in defining what a step is.

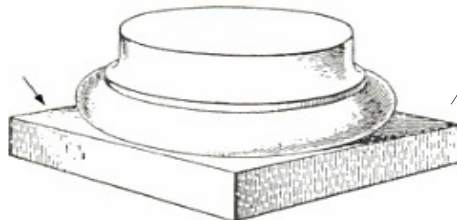
A "step" is:

a rest for the foot in climbing, as a stair or the rung of a ladder

This "rest" is a small area between the risers of an incline or stairway. When one moves his/her foot from one "step" to the next, he/she is going up or down. When one places a foot upon the lawn at the bottom of Monticello's steps, that lawn is not a step, it is the lawn, a large area, not a momentary step or part of the stairway (steps). When one moves his/her foot from the top step onto the stylobate, that stylobate is not a step, it is a large porch-like area. The movement of the foot up or down does not define a stair step. A step is a combination of a riser and a tread (which is the small rest area). So if collectors define the top step as the stylobate, then they must also see the lawn as a step! Herein you see the inconsistency of their step evaluations. The top step is NOT the stylobate, rather it is the top tread.

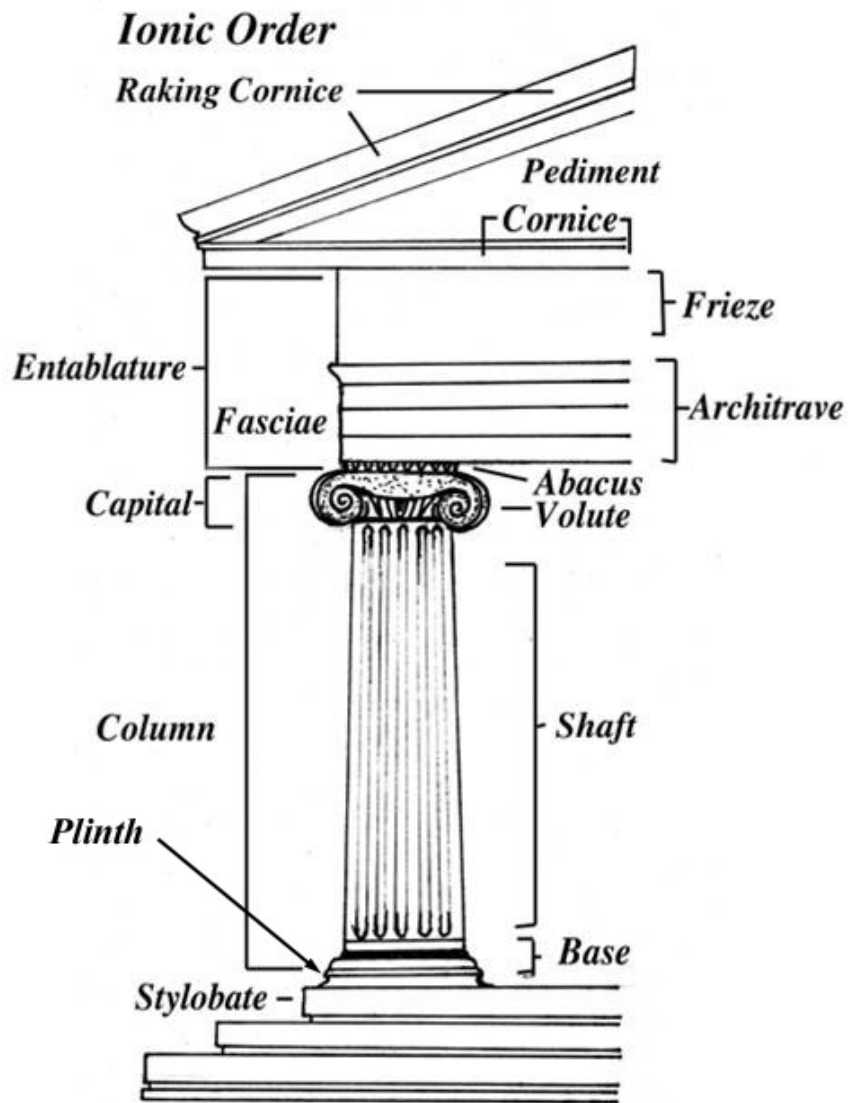
Now to validate my view of counting steps. Below a plinth:

plinth 1. A square or rectangular base for a column, pedestal, pier, or pilaster. 2. A solid monumental base, often ornamented with moldings, bas-reliefs, or inscriptions; sometimes used to support a statue or memorial.



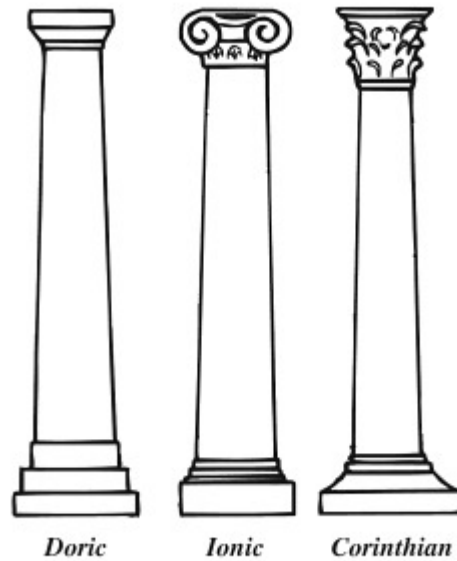
plinth,1

The front four columns of Jefferson's Monticello rest on plinths. This conforms to ancient Greek style:



Actually Jefferson designed columns of the Doric order, illustrated below: (but the plinth's are common to both styles)

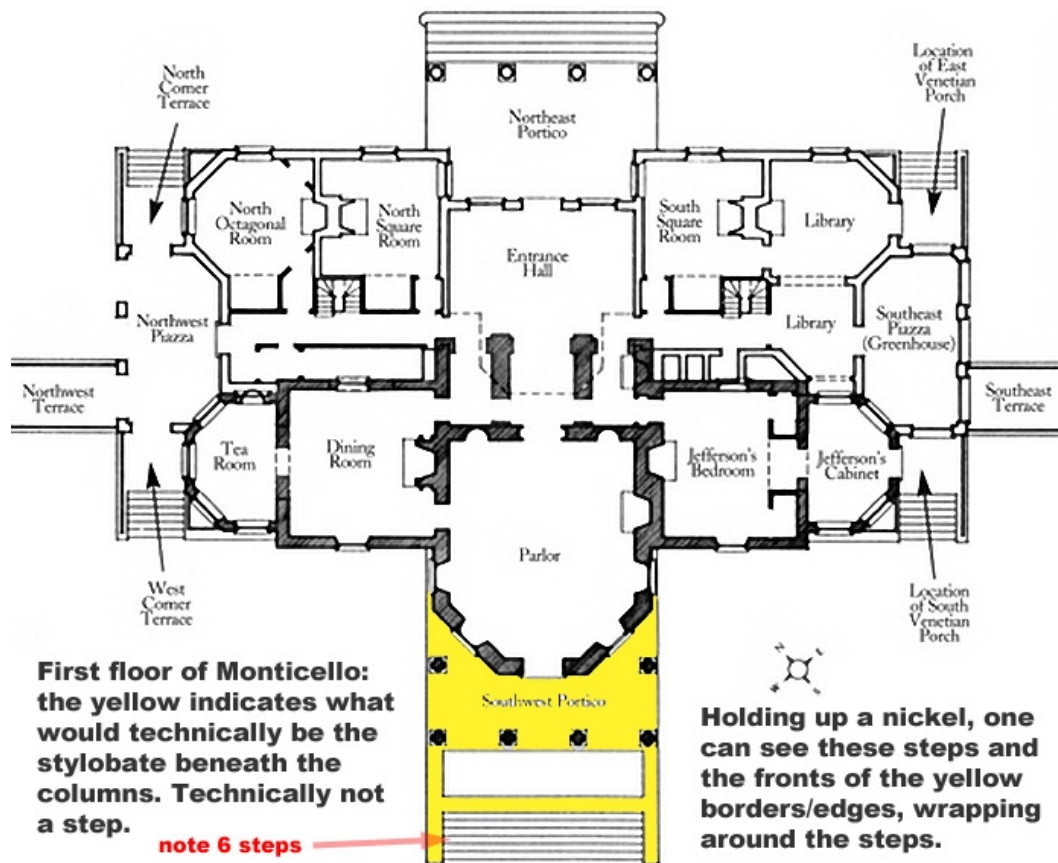
Classical styles of columns



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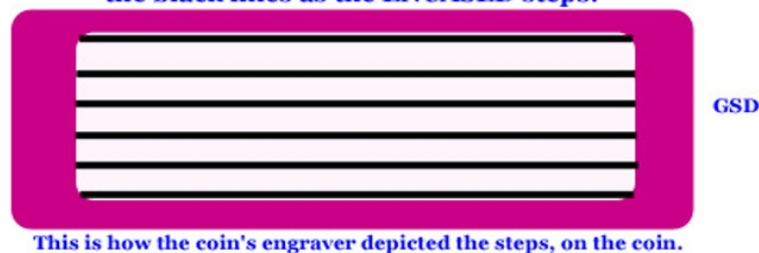
When looking at the coin, one with a good sharp and full strike, the square plinth's are visible under each column. Each column rests upon its plinth. Each plinth rests upon the base or foundation for all of the columns, the stylobate. As you may observe the stylobate is not a step, it is like the deck or the porch floor.

Jefferson's stylobate is interesting in that he enclosed a small patch of grass within the porch area between the columns and the steps. This can be seen below as the rectangular area between the columns and the steps below:



Note the extensive area of the stylobate, it extends out and around the sides of the steps as well. In the early design of the Jefferson coins, the stylobate appeared to encase the steps, looking very much like this:

View the maroon color, as the stylobate (as on the coin) and the black lines as the ENCASED steps!



Additionally, a photo of the actual steps may assist. Note this one from *Getty Images* below:

Thanks to Mr. Runkel,
we have a nice image
of the steps at
Monticello.

I
point out the 6 steps
And indicate the
plinth
and the
stylobate.

1
2
3
4
5
6



As you can see when you step down from the bottom step, you land on the lawn, which is not itself a step. And when you step up from the top step, onto the stylobate, you land on the stylobate (porch deck), which itself is not a step. Is this clear and understandable? Those who insist upon counting the stylobate (porch) as a step would then see seven full steps in the above image. Thus their old error is made plain. It needs to be rectified. There are only six steps, a lawn and a porch (stylobate). Some coins only show five steps, some will show six steps, but none show seven steps. Stepping up from the lawn you land on the first small foot rest (step, tread), five more small rests and treads later and you then step up onto the stylobate, this is not a tread, thus it is not a step (a stair step includes BOTH a riser and a tread). The lawn has no further steps, nor does the stylobate, they are not steps. [NOTE: the noun "step" does not = the verb "step".]

Typically one counts the INCUSED lines seen on a coin, each line represents the riser of each tread, which is a thin cement cap. Most coins do not show a six full steps.

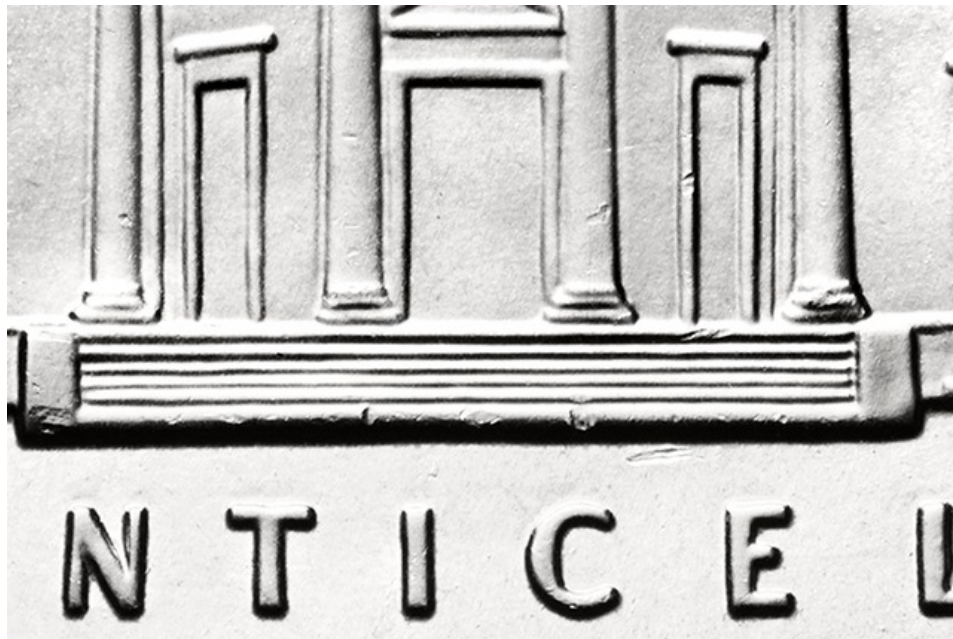
The coin's designer, Felix Schlag, presented Monticello as if the viewer was facing the "porch" with the top step at eye level. He could not or did not add the grass which was in front of the lower portion of the bottom (number six) step. From his viewpoint, the steps could appear as encased within the stylobate. In Monticello the stylobate extends to the left and right sides of the steps, its upper part is a thin cement "cap" over the bricks. It also has an open area of grass between the steps and the columns! Note this side view:



https://commons.wikimedia.org/wiki/File:Monticello_SW_portico_horz.jpg

© Galen Parks Smith

I recall making an earlier posting on the coin forum "Coin Talk" in which I illustrated the step structures, however in it I made an error! I showed the middle "line" of the "belly-roll" as a step. I did this because I was trying to correlate a five step coin with a drawing showing six steps. So even unintentional errors can occur and cause unintended problems. Just take your time and study. In the images below, I trust that the issues are clarified and correct!



Note how the upper stylobate "flows" all around the steps, down along each side, and then into the "belly-roll" at the very bottom! In reality, the "belly-roll" was the bottom riser with grass along its lower edge, a "belly-roll" was how Schlag portrayed it.

As a metal engraving the effect was very good, and gives a fairly accurate effect. This "belly-roll" also provided for a nice base, with its outward curve. When a collector holds up and views the coin,

the outward curving "belly-roll" reflects back the light in such a manner as to suggest a line! Perhaps this image will help clarify:



Notice that the curved "belly-roll" is darker colored on its flatter face, at its very lowest edge the white color is coming from light reflected from the shooting environment, below this light is the darker shadow! The lights are placed to the north. This "line" between the darker face and the lighter upper curve often appears as a straight line. (The above is a 1991 P, graded as 5FS, NGC). Below, on another coin, the colors are easier to view, the light is coming from the north.

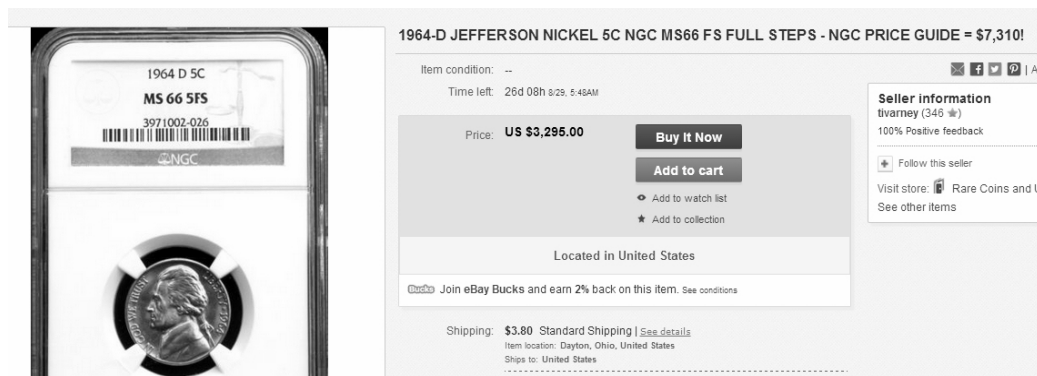


PCGS graded this very coin below as FS! note:



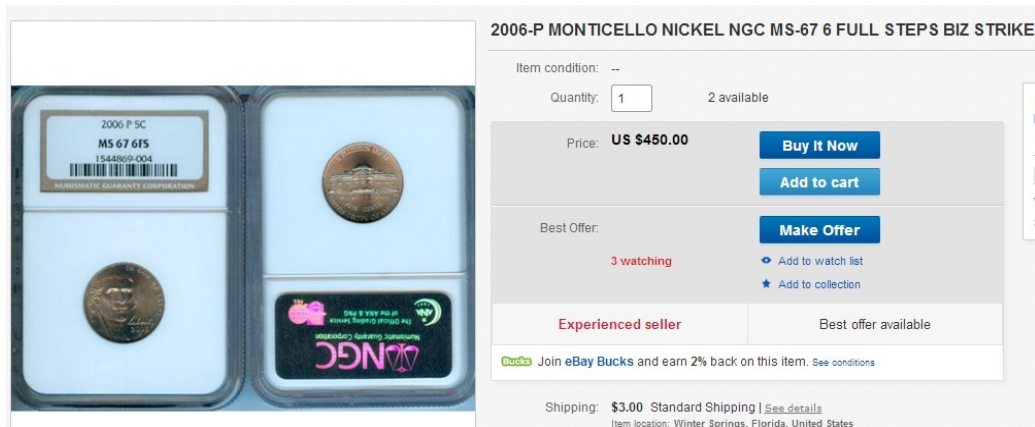
Obviously, in the above coin, they were counting the porch deck as a step, in doing so they were following guidelines established by the earlier coin collecting clubs, as stated in *The Jefferson Nickel Analyst*, [Nagengast, 2nd edition], page 28, wherein he states that: "the porch deck is always included as a step". That is the problem, it should not be included; if one includes the porch as a step, then—to be consistent—one should include the lawn as a step. Again is this not clear?

Well then what about this offering?



Before one pays \$3,295.00 one should know his/her steps! Sadly the images of the coin do not show in detail the steps! Certainly more communication is foreseen.

And what of this one?



\$450.00 for a 2006 P , NGC graded coin? Nice coin, nice steps, nice as MS 67, but not for \$450.00 especially as they can still be found roll hunting (at least as MS 65, MS 66). Buyer beware.

Below, is a 1941 D, 5FS as per NGC,



Now as per my reckoning, it is four full steps, with a long bridge in the fifth step, thus a 5-4-4-5. In NGC's own language, this probably should not be a FS coin. And one more from NGC,



[The above 1940 D coin is part of Mr. Paul Drewes extensive collection].

What do you see? I see four clear lines, with a fusing (bridge) in the fifth. Thus a 5-4-4-5 hardly a full step coin per NGC's own statements.

Below, I explain this particular image a bit more.

The fifth step is strongly bridged at columns 3-4.



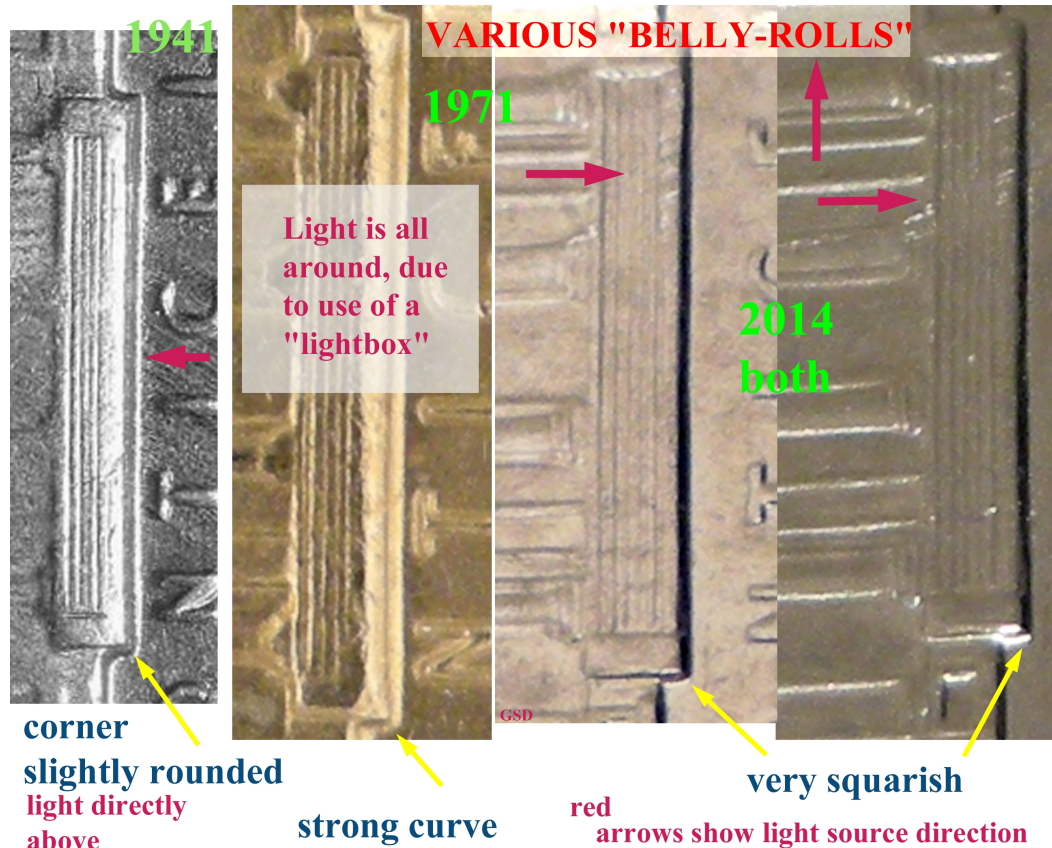
I suspect that NGC is right most of the time, as I had to hunt to find these questionable exceptions, and basing my judgments upon images alone, I am liable to misjudge! But the images are sufficient in some cases. The 1940 D above is a 5-4-4-5 in my opinion. NOT FS.

The question then arises, how is it that some TPGs and some folks see, for example, 5 full steps whereas on the same coin others see 6 full steps? This will cause some confusion. Besides the problem of counting the porch deck, I suspect the "belly-roll" and its appearance may be the culprit on the earlier coins, as its roundness can reflect back the light in such a manner as to suggest a step's line! Again note:



The bottom "belly-roll" curve shows contrasting reflected light: the upper portion of the curve is white, and the lower portion is gray. The division appears as a line, and thus could be confused as a step by some folks. (The above is a 1941, FS, per PCGS).

The lower "belly-roll" or bottom of the encasement, shows some variations over the years; note below,







Of course the edges could not be sharp, as this would be difficult to mint and probably harder on the dies. Edges can appear rounded due also to wear, as they may have been much more square when minted. But square or round, a reflected line can appear as demonstrated above. This separation line may be the cause for some to declare that such-and-such a coin is full step et cetera.

Carefully note the 5FS coin example which follows, if the "belly-roll" line is not taken into account, then only one other option exists (outside of a regular error). That option is the grader is counting the stylobate as a step! Laugh not, it is more common than one suspects, as I have demonstrated.

Below is the NGC 5FS 1991 P coin which was demonstrated earlier:

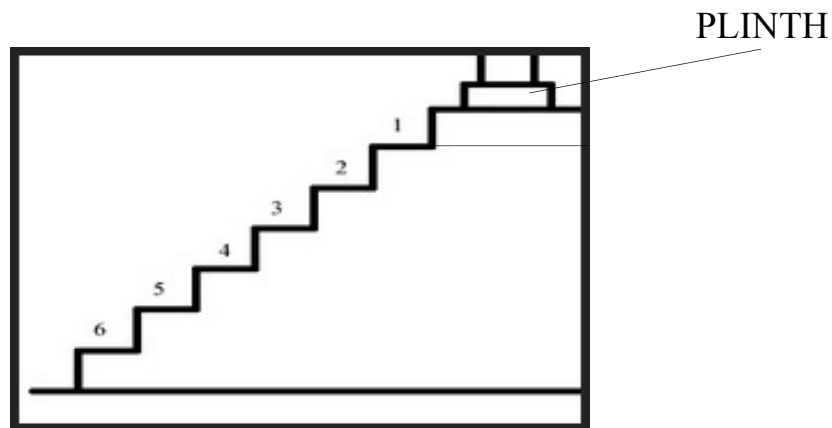


5FS as in five FULL steps? How can NGC validate this one? The only answer is that they are including the stylobate as a step, a common error. In fact a popular nickel coin website shares this erroneous information seen below:

			
2	2	2	2
3	3	3	3
4	4		4
5	5		5

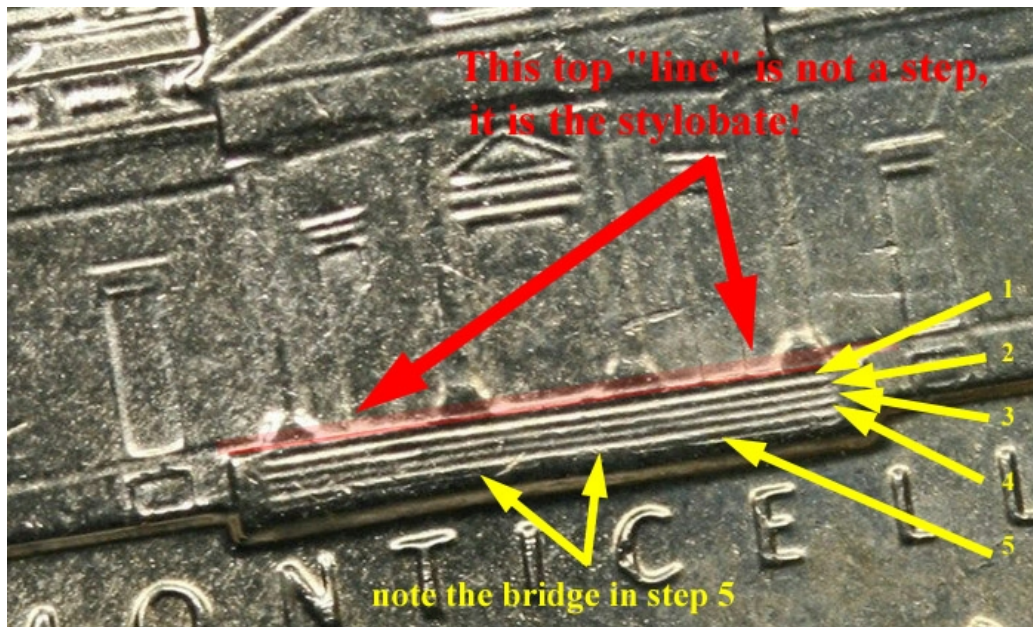
3 Full Steps 5-5-3-5

In the above drawing, one can see the source for many errors; the coin represented should read: 4-4-2-4. Their image shows 6 black lines total, **but they are counting the top line [just under the plinths] as step #1**, this line is not a step, it is the stylobate, the deck under the columns! The line just **below** their #2 (in the above) is actually the top of the first step. But, do note at the bottom of the above web page (www.varietynickels.com), they do show a correct diagram, reproduced below: (slightly altered)



Correct -- if they view the line, which the #1 is sitting upon--as the tread of the top step. However, knowing these folks, I am sure they are counting the stylobate as the number 1: hence the confusion persists. The actual coin, and the actual building's designs are really ignored. However, even with my correct method of counting the steps, true six full steps coins exist! On the flip-side, many five step coins may need to be reclassified as 4 step coins.

Imagine, in the above drawing, standing on the lawn, you step up to the top tread (foot rest) in this scenario it is step #1, then raise your foot to #2 tread, and so on. You will soon be standing on tread #6, the top step. Raise your foot again and you land not on a tread but upon the stylobate! Surely you can slow down and visualize this! It should be clear!



The above image brings up one final point to observe, the lighting. Collector's are often told to count the incused lines as steps, this is correct. But depending upon the angle of the lighting, these lines may appear as dark OR white. In the above 1991 D coin. The light is shining from the top (from the north), so the treads of the steps are white.

Below is a typical ad for a 1998 P full step coin.



1998-P JEFFERSON NICKEL NGC MS66 6FS 6 FULL STEPS

\$68.88

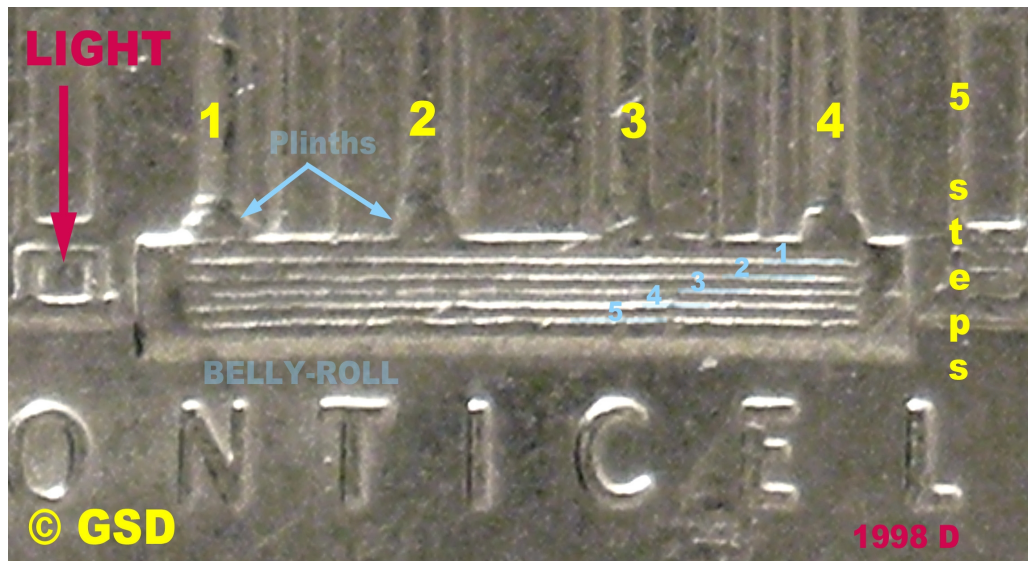
Buy It Now

Free shipping



The reverse image of the above 1998 P coin, does not show the steps in any kind of detail, so the buyer must depend upon NGC's label!

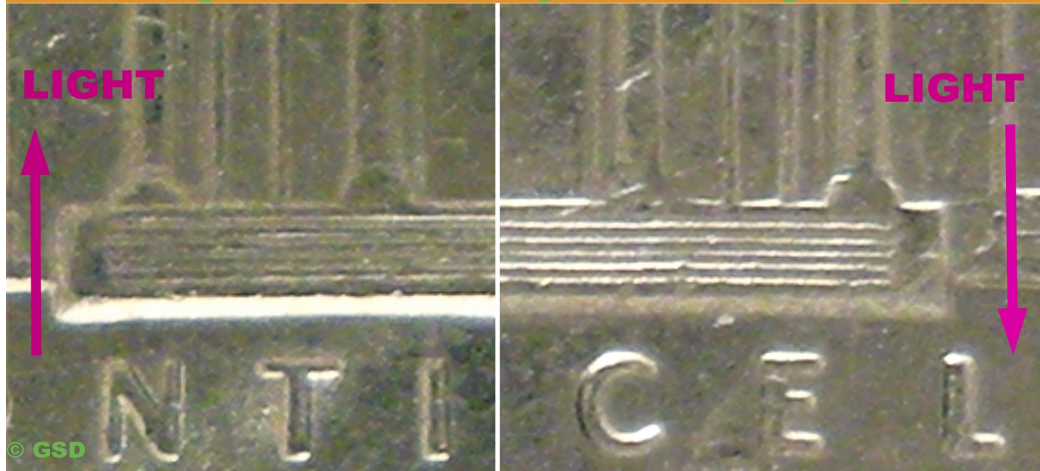
Below is a 1998 D coin, which only appears to be a 5 step coin, hence it would sell for less than the rarer six full steps.



[Recall, that I suggested that reader's view this paper in color.]

Nice steps, but only five, apparently (notice the contrast line in the belly-roll). BUT.....BUT.... let us take this same nickel, the 1998 D (which seems to be five step) and view it under different lighting set-ups.

Same 1998 D coin, but notice how the direction of the light can radically alter the perspective. In the image on the left, one could easily suspect the contrasting colors in the "belly-roll" as being a step.



Same 1998 D coin, but big difference. Do I detect a faint line just under #4 plinth, in the right side image? Now let us view a shot of the same coin with lighting from directly overhead.



AHA!!! This is almost a full six step coin. Albeit the very top step is narrow, it is barely visible, it extends almost fully from right to left! 5-6-6-6. Hence should this coin be offered for sale, its value is higher as it is very close to being a full six steps. The lighting was key here. Had we the coin in hand (as I do), we could see the thin upper step via magnification (a loupe). Fortunately MOST coins seen in sales ads are photographed with direct overhead lighting. Even two bulbs placed on the left and right sides, (but at at least a 45° angle) also serve as "overhead" lighting. [You do not see two "at's" together, very often].

The final point concerning all of this, is that some folks will see five steps, and some may see six full steps in a coin. A standard needs to be in place, a clear standard. I also believe the standard should be architecturally correct, this hobby does not need amateurish or humiliating mistakes like this. Further when bidding on a coin, one should note that unless the photography is completely revealing, it is best to ask the seller for a better image, OR examine the coin in hand with a return function available. And lastly, with a true standard in place the TPGs will be forced to adjust and to be much more careful and accurate. (At this time, both NGC and PCGS have flooded the hobby with very questionable labels! So some repair work is unfortunately needed). Whatever the standard may be or become, I personally will not ever count the porch or lawn as a step! Unless I must communicate with buyers and sellers who count the "porch" as a step. I remain tolerant and understanding.

CONCLUSION:

Three types of errors have been noted as concerns reading the steps on the reverse of the Jefferson series nickels. They are:

(1) seeing the reflected dividing line (divided between light and dark) in the "belly-roll" as the bottom step. This apparent line is not a step. The top of the "belly-roll" is the first tread of the bottom step

(2) counting the stylobate as a step (a "top" step). It is not a step.

(3) not recognizing the color of the tops of the steps, confusing the risers with the treads. First determine from where the light is shining—which can be a challenge! At times ambient light, or reflected (even diffused) light from a light box, can add to the mix! Recall that the incused lines, are typically the inner risers, their tops (the treads) are usually the white lines (usually).

I make errors, and will continue to do so, but I hope that this brief illustrated paper helps reduce the error rates seen in ascertaining the number of steps on Jefferson nickels. [And yes, I hear the cries of those who lament that they may have to resubmit, in time, perhaps, if my suggestions herein are accepted!!]. I do not slab coins, nor buy slabs (I prefer raw coins). If a dealer or collector you know has trouble understanding the architecture/steps, send him/her a copy of this. I also hope the grading companies take their task even more seriously and clarify their grading statements as concerns the elusive full step Jefferson nickels.



APPENDED IMAGE:

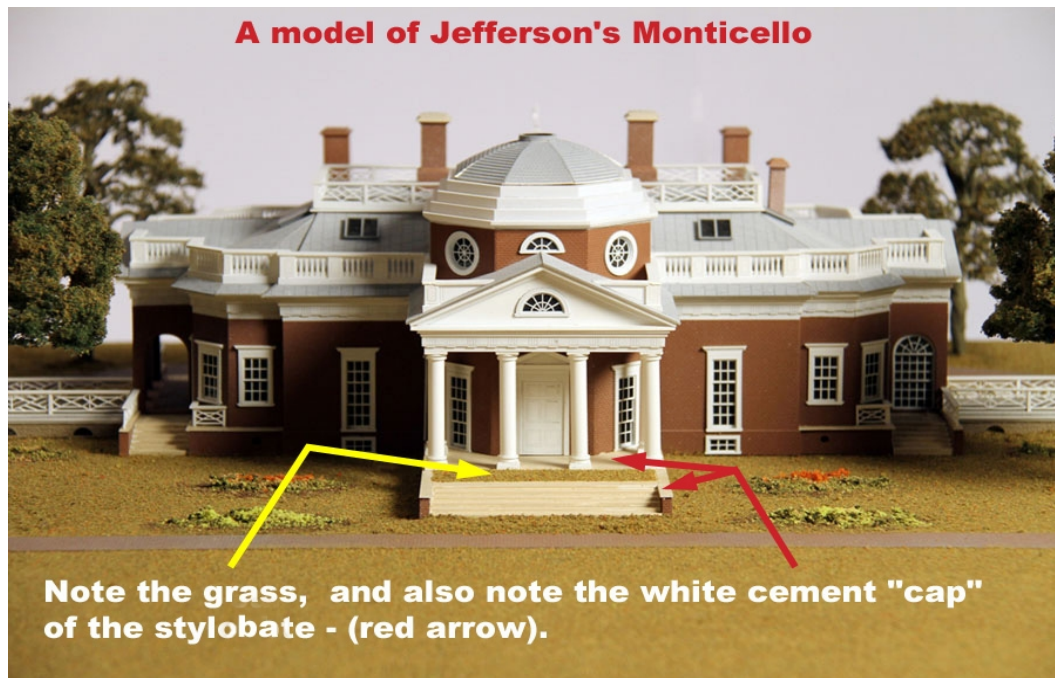


image credit: Thomas Jefferson Foundation © Thomas Jefferson Foundation, Inc.

CREDITS: [including the public domain images]

PCGS is:



Professional Coin Grading Service - their website is: www.pcg.com
to date PCGS has graded over 30 million coins!

NGC is:



Numismatic Guaranty Corporation - their website is:

www.ngccoin.com

to date this company has graded over 32 million coins. It is the world's largest coin grading service, with international locations.

The image of the model of Monticello was provided by:

http://www.neh.gov/files/divisions/public/images/26_monticello__resized.jpg

The image of the first floor plan was provided by:

<http://www.monticello.org/site/house-and-gardens/floorplan-monticellos-first-floor>

image credit: Thomas Jefferson Foundation © Thomas Jefferson Foundation, Inc.

¹ refers to Nagengast, Bernard A.. *The Jefferson Nickel Analyst*. 2nd, ed. 2002. E&T Kointainer Co. Sidney, Ohio. (i.e. Nagengast owns E&T Kointainer Company, so he self published). A very useful and recommended book!

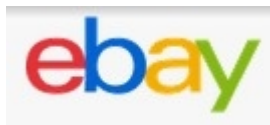
The image of the side of Monticello was provided by:



https://commons.wikimedia.org/wiki/File:Monticello_SW_portico_horz.jpg

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and finally, *EBAY* the world's largest buying and selling site:



Its central website is: www.ebayinc.com

The NGC graded 1940 D coin, belongs to Mr. Paul Drewes.

The image of the actual 6 steps was from the *Getty Images* Collection, the photo was by Michael Runkel, per its watermark.

Some of the diagrams of the column orders were from: *American Architecture: An Illustrated Encyclopedia*, by Cyril M. Harris.

Several step diagrams were utilized from: www.varietynickels.com

Some images of the coins are from Mr. Dykes's personal collection.